SLOVENSKI STANDARD
SIST EN 15773:2018

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Nadomešča:
SIST EN 15773:2009

Industrijska uporaba praškastih organskih premazov za izdelke iz vroče galvaniziranega ali difuzijsko pocinkanega jekla [sistemi dupleks] - Specifikacije, priporočila in smernice

Industrial application of powder organic coatings to hot dip galvanized or sherardized steel articles [duplex systems] - Specifications, recommendations and guidelines

Industrielle Pulverbeschichtung von feuerverzinkten und sherardisierten Stahlartikeln [Duplex-Systeme] - Spezifikationen, Empfehlungen und Leitlinien

Application industrielle de revêtements en poudre organiques à des produits en acier galvanisés à chaud ou shérardisés [systèmes duplex] - Spécifications, recommandations et lignes directrices

Ta slovenski standard je istoveten z: **EN 15773:2018**

ICS:

25.220.60	Organske prevleke	Organic coatings

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 15773

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Supersedes EN 15773:2009

English Version

Industrial application of powder organic coatings to hot dip galvanized or sherardized steel articles [duplex systems] - Specifications, recommendations and guidelines

Application industrielle de revêtements en poudre organiques à des produits en acier galvanisés à chaud ou shérardisés [systèmes duplex] - Spécifications, recommandations et lignes directrices

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This European Standard was approved by CEN on 6 November 2017.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 15773:2018) has been prepared by Technical Committee CEN/TC 139 “Paints and Varnishes”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15773:2009.

The following changes have been made to the existing standard while developing the draft for enquiry:

— References to the sherardizing standard EN 13811 updated acknowledging the publication of EN ISO 17668.

— References to EN ISO 14713 were updated acknowledging the publication of Parts 1, 2 and 3.

— Clause 4.2 edited to include the reference to ‘powder organic coating’.

— Clause 4.2 recommendation added to indicate that requirements for surface smoothness should be agreed.

— Clause 4.3 edited to reflect sherardizing coating thickness classes in EN ISO 17668.

— Clause 4.3 edited to reference sherardizer.

— Clause 5.3 edited to reference sherardizing process.

— New Clause 6.3 added to deal with surface preparation and paragraph 4 of existing Clause 6.2 transferred to the new clause.

— A reference to Annex C included in new Clause 6.3.

— Additional information included in Annex C regarding surface smoothness.

— Clauses 6.3 and 6.4 renumbered accordingly.

— Clause 7.1 edited to refer to Annex D not Annex C.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

In order to achieve a duplex system which satisfies the many varied aesthetic and performance requirements currently in existence in the marketplace, the following aspects of the supply and application of the systems should be controllable:

— fabrication and composition of the material (Clause 5);

— the zinc coating (Clause 6);

— surface smoothing for coating (Clause 6);

— environmental conditions during storage, transport and application (Clause 6);

— the pre-treatment of the zinc surface (Clause 7);

— instructions provided by chemical pre-treatment suppliers (Clause 7) and powder manufacturers (Clause 8);

— the powder organic coating system (Clause 8);

— packaging, storage and movement of finished products (Clause 9);

— installation (Clause 10);

— inspection (Clause 11).

This European Standard does not incorporate the application of paint coatings according to EN ISO 12944 (parts 1 to 8) [1] when paint systems are specified. This European Standard incorporates the application of coating powders according to EN 13438 when powder coatings are specified.

This standard might also be useful when supplying other organic coating systems (excluding wet paint systems).

Table 1 shows the relationship between this European Standard, EN 13438 and other standards relating to zinc coated articles.

Table 1 — Standards for powder organic coatings and hot dip galvanized steel or sherardized steel

Galvanizing or sherardizing	Powder organic coatings for galvanized or sherardized steel products	Communications and quality issues surrounding supply of duplex coated articles
EN ISO 1461 EN 10240 EN 10346 EN ISO 17668	EN 13438 or specific product specification	EN 15773
Good communications in place and agreements made between galvanizer or sherardizer and client regarding general quality requirements in relation to zinc coating. NOTE EN ISO 14713-2 and –3 also provide useful information on design for galvanizing and sherardizing respectively.	**Good communications in place and agreements made between the client and the company applying the powder organic coating regarding general quality requirements of the powder organic coating.**	**Good communications in place and agreements made between client, galvanizer or sherardizer and applicator of the powder organic coating regarding quality requirements for duplex systems in relation to quality of zinc coating, the pre-treatment and powder organic coating.**

1 Scope

This European Standard specifies the agreements to be made between the client, the galvanizer / sherardizer, the chemical suppliers and the applicators of the pre-treatment and the powder organic coating systems (if they are not one and the same). It also specifies the quality of the galvanized or sherardized articles to which the powder organic coatings are to be applied and for the pre-treatment and powder organic coatings intended for application to the galvanized or sherardized articles.

This standard applies to the application of hot dip galvanized, sherardized and powder organic coatings by controlled industrial processes to articles consisting of or manufactured from steel. The standard applies to hot dip galvanized products, galvanized in accordance with EN ISO 1461 and EN 10240 or products sherardized in accordance with EN ISO 17668, as well as parts of these products manufactured from continuously galvanized sheet and strip galvanized in accordance with EN 10346, which, after the galvanizing and/or assembly, or sherardizing, will have a powder organic coating system applied. This standard also applies to products which have been hot dip galvanized or sherardized according to specific product standards to which powder organic systems are applied.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10021, *General technical delivery conditions for steel products*

EN 10130, *Cold rolled low carbon steel flat products for cold forming — Technical delivery conditions*

EN 10163-1, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections — Part 1: General requirements*

EN 10163-2, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections — Part 2: Plate and wide flats*

EN 10163-3, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections — Part 3: Sections*

EN 10221, *Surface quality classes for hot-rolled bars and rods — Technical delivery conditions*

EN 10240, *Internal and/or external protective coatings for steel tubes — Specification for hot dip galvanized coatings applied in automatic plants*

EN 10346, *Continuously hot-dip coated steel flat products for cold forming — Technical delivery conditions*

EN 13438, *Paints and varnishes — Powder organic coatings for hot dip galvanised or sherardised steel products for construction purposes*

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods (ISO 1461)*

EN ISO 5817, *Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections (ISO 5817)*

EN ISO 14713-1, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 1: General principles of design and corrosion resistance (ISO 14713-1)*

EN ISO 14713-2, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 2: Hot dip galvanizing (ISO 14713-2)*

EN ISO 14713-3, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 3: Sherardizing (ISO 14713-3)*

EN ISO 17668, *Zinc diffusion coatings on ferrous products — Sherardizing — Specification (ISO 17668)*

ISO 9223, *Corrosion of metals and alloys — Corrosivity of atmospheres — Classification, determination and estimation*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
applicator
company that applies the powder organic coating

3.2
controlled industrial process
controllable and reproducible process, executed in steps under controlled conditions

Note 1 to entry: Often subject to a degree of automation, carried out in industrial buildings or mobile installations

3.3
surface smoothing of the product
reduction, usually by means of mechanical finishing, of roughness associated with the galvanized or sherardized surface such that when the galvanized or sherardized surface is pre-treated and coated with the powder organic coating system, no protrusions penetrate through the organic coating

3.4
duplex system
combination of an organic thermosetting coating or thermoplastic powder coating and a hot dip galvanized coating or sherardized zinc coating on steel products

3.5
designer
company / individual responsible for the design of a structure or product that will be finished with a duplex system

3.6
client
company / individual that orders the duplex system

3.7
specifier
company / individual that specifies the duplex system

3.8
sherardizer
company that applies the zinc coating by the sherardizing process

3.9
galvanizer
company that applies the zinc coating by the hot dip galvanizing process

3.10
hand dry products
products free of rain and condensation water in pores and on the surface

3.11
fabricator
company / individual manufacturing steel products that will be finished with a duplex system

3.12
powder manufacturer
company / individual producing the organic coating powder to be applied onto the galvanized or sherardized steel substrates to complete the duplex systems

3.13
transporter
company(ies) or individual(s) responsible for transportation of the hot dip galvanized or sherardized steelwork to the powder coating applicator and / or the transportation of the finished (duplex coated) work to site

3.14
installation
fitting of duplex coated articles on site

3.15
pre-treatment chemical supplier
company(ies) or individual(s) producing the pre-treatment chemicals to be used within the powder coating process

4 Ordering

4.1 General

The client shall make sure that all of the parties involved are notified that a duplex system will be applied. This requires good communication between the client, the steel purchaser, the fabricator, the galvanizer or sherardizer, and the companies applying the pre-treatment and the powder coating.

Table 2 outlines the phases of the supply process, the requirements for communications between the parties involved at different supply stages and the requirements which apply to the various phases of the supply process.